

# KENWOOD

Listen to the Future



## TK-7180(H)/8180(H) MPT

VHF/UHF MPT1327 Trunked Mobile Radios

### GENERAL FEATURES

- 30W / 50W (136-174 MHz)
- 30W / 45W (450-520\*, 400-470 MHz)
- Remote Control Head Option<sup>1</sup>
- Backlit Dot Matrix LCD
- 12 Character Alphanumeric Aliases
- 3-Digit Sub-Display
- Function / Status LCD Icons
- Display Customization
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 6 Backlit PF Keys
- Emergency / AUX Key
- 4 Watt Front Panel Speaker
- Voice Inversion Scrambler Built-in
- Enhanced Kenwood Audio
- Encryption Board Control
- Easy Option Port<sup>1</sup>
- VGS-1 Voice Storage Option<sup>1</sup>
- DTMF Manual Encode<sup>2</sup>
- Timed Power Off
- DB-25 Accessory Connector
- 9 Programmable AUX I/Os
- 2 Programmable AUX Outputs
- Ignition Sense<sup>3</sup>
- Mil-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option

- Windows® Programming & Tuning<sup>4</sup>
- Windows® Firmware Uploading<sup>4</sup>
- Front Panel Test / Tune
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"<sup>5</sup>
- IP-54/55 Water & Dust Intrusion<sup>5</sup>

### CONVENTIONAL ZONES<sup>6</sup>

- 32 Channels
- 12.5/25 kHz CH Spacing (per CH)
- QT / DQT Encode & Decode
- Normal Scan (No Priority)
- Scan Delete / Add
- Companded Audio (per CH)
- Time Out Timer
- Busy Channel Lockout (per CH)

### TRUNKED ZONES<sup>6</sup>

- 8 Network Capacity
- Multi-Site Network Trunking
- Single-Site Trunking
- Network Roaming/Registration
- 12.5/25 kHz Spacing (per network)

- Individual Call ("Private Calling")
- Group Call
- Broadcast Call
- Inter-fleet Calling
- Inter-Prefix Calling
- PTT Intiate Call
- PSTN/PABX Call
- Priority Call
- Emergency Call
- Pre-emptive Emergency
- Emergency Calling Features
- Emergency Man-Down Option
- Full Off Air Call Setup
- Network Call Queuing
- Call Prioritization
- Third-Party Diversion
- Queue Incoming Call
- Special Alert Tones<sup>7</sup>
- Electronic Serial Number (ESN)
- Manual Conventional Mode
- 250 Call and Group Address List
- Group Scan
- Home Address
- Direct Address
- Companded Audio<sup>8</sup>
- Network Selector
- KAP-2 PA/Horn Alert Option<sup>9</sup>



# Options

<ul style="list-style-type: none"> <li><b>KMC-35</b> Microphone (supplied microphone)</li> <li><b>KMC-36</b> Keypad Microphone</li> <li><b>KMC-32</b> Keypad Microphone</li> <li><b>KMC-9C</b> Control Station Desktop Microphone</li> <li><b>KRK-10</b> Control Head Remote Kit (23ft/7m)</li> </ul>	<ul style="list-style-type: none"> <li><b>KCT-46</b> Ignition Sense Cable</li> <li><b>KCT-40</b> Radio Interface Cable (for KDS-100, KGP-2A/2B)</li> <li><b>KCT-23M</b> DC Cable (Dash mount / 10 feet)</li> <li><b>KCT-23M3</b> DC Cable (Remote mount / 23 feet)</li> <li><b>KAP-2</b> Horn Alert/Public Address Relay Unit</li> </ul>	<ul style="list-style-type: none"> <li><b>VGS-1</b> Voice Guide &amp; Storage Unit</li> <li><b>KES-3</b> External Speaker</li> <li><b>KES-5</b> External Speaker (requires KAP-2)</li> <li><b>KMB-10</b> Key Lock Adapter</li> <li><b>KLF-2</b> Line Noise Filter</li> </ul>	<ul style="list-style-type: none"> <li><b>KPS-10A</b> DC Power Supply</li> <li><b>KPS-15</b> DC Power Supply</li> </ul>
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All accessories and options may not be available in all markets.  
Contact an authorized Kenwood dealer for details and complete list of all accessories and options.

# Specifications

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>GENERAL</b>				
Frequency Range	136~174 MHz		450~520 MHz	
Type 1	136~174 MHz		450~520 MHz	
Type 2	-		400~470 MHz	
Number of Channels*	Max.32 per Radio			
Conv. Mode	1023			
Trunked Network	1023			
Channel Spacing	25 kHz, 30 kHz		25 kHz	
Wide	25 kHz, 30 kHz		25 kHz	
Narrow	12.5 kHz, 15 kHz		12.5 kHz	
Operating Voltage	13.6 V DC±15 %			
Current Drain				
Standby	0.4 A	0.4 A	0.4 A	0.4 A
Receive	1.0 A	1.0 A	1.0 A	1.0 A
Transmit	9.0 A	13.0 A	9.0 A	13.0 A
Duty Cycle	Transmit: 20 %			
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C)			
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)			
Antenna Impedance	50 Ω			
Channel Frequency Spread				
Type 1	38 MHz		70 MHz	
Type 2	-		70 MHz	
Dimensions (W x H x D), Projections not included	6-5/16" x 1-3/4" x 6-3/16" (160 mm x 45 mm x 157 mm)			
Weight (net)	3.3 lbs. (1.5 kg)			
FCC ID				
Type 1	K4437303110	K4437303210	K4437313110	K4437313210
Type 2	-	-	K4437313120	K4437313220
IC Certification				
Type 1	282F-37303110	-	-	-
Type 2	-	-	282F-37313120	-

\*Maximum capability depends on the number of programmed Zone and repeater channels.

# Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
<b>Low Pressure</b>	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
<b>High Temperature</b>	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
<b>Low Temperature</b>	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
<b>Temperature Shock</b>	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
<b>Solar Radiation</b>	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
<b>Rain</b>	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
<b>Humidity</b>	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure I, III	507.4
<b>Salt Fog</b>	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
<b>Shock</b>	516.2/Procedure I, II, III, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V

International Protection Standard	
<b>Dust &amp; Water Protection</b>	P54: Radio itself P54/55: Remote Head with KRK-10

\*To meet above MIL810 and IP grade, weather proof microphone KMC-35 or KMC-36 has to be connected.

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>RECEIVER (Measurements made per EIA/TIA-603)</b>				
Sensitivity (12dB SINAD)				
Wide	0.25 μV		0.28 μV	
Narrow	0.28 μV		0.28 μV	
Selectivity**				
Wide	80 dB		80 dB	
Narrow	70 dB		67 dB	
Intermodulation Distortion				
Wide/Narrow	75 dB (±50, 100 kHz)			
Spurious Response**	90 dB		85 dB	
Audio Output (4 Ω Impedance)	4 W with less than 5 % distortion			
<b>TRANSMITTER (Measurements made per EIA/TIA-603)</b>				
RF Output Power				
Type 1	30 to 1 W	50 to 10 W	30 to 1 W	45 to 10 W
Type 2	-	-	30 to 1 W	45 to 10 W
Spurious Response	70 dB			
Type of Emission				
Wide	16K0F3E			
Narrow	11K0F3E			
FM Hum & Noise				
Wide	50 dB			
Narrow	45 dB			
Microphone Impedance	600 Ω			
Audio Distortion				
Wide/Narrow	3 %			

\*\* Typical specifications  
Kenwood follows a policy of continuous advancement in development. For this reason specifications may be changed without notice.

- footnotes from Front:
- Easy Option Port: Supports Encryption boards or VGS-1 only; ANI boards are not supported. VGS-1: Auto-Reply only operates in MPT trunked mode. Auto-Record, Voice Memo operates in Conventional & MPT Trunked modes.
  - DTMF Manual Encode (DTMF microphone required)
  - KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.
  - KPG-96D required: Windows\*98/ NT/ 2000/ Me/XP compatible.
  - MIL-STD "Driven-Rain" and IP-55 Water/Dust intrusion apply to remote control head only; IP54 applies to radio chassis.
  - Conventional Mode: Mode entry by PF key or auto Mode Change. Network/Trunking operations are MPT1327/1342 compatible.
  - Special Alert Tone Patterns: enabled for MPT Individual Call, Auto Mode Change.
  - Companded Audio can be enabled for "all Channels: in Trunked Mode and per Channel in Conventional Mode.
  - KAP-2 required: Public Address & Horn Alert operate in MPT mode only.

\* TK-8180K/HK models are derated to 25W/ 40W power from 490-512 MHz



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